Craig Clinic



Alaska Rural Primary Care Facility

Code & Condition Survey

Final
October 7, 2003





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APPENDIX A: DEFICIENCY TABLES & PHOTO LOGS

APPENDIX B: GENERAL PHOTOS



1.0 INTRODUCTION

The Craig Clinic, located in Craig, Alaska, currently operates as a non-profit Family Practice clinic. The City of Craig owns the site where this facility is located and shares space leased by the Public Health Nurse offices. Also sited on the property to the South is the Prince of Wales Emergency Resources (POWER) building.

The Craig Clinic, formally known as the Seaview Medical Clinic, has undergone three phases of building construction. In the late 1970's, the original building was the Public Health Office and followed shortly after that with the first addition. The second addition was built between 1982 and 1984. Essentially, addition two and part of addition one comprise the Craig Clinic. The medical staff appeared to be very competent with medical issues and in giving quality time for patient care and comfort in attending to their physical needs. The clinic operates Monday through Friday, from eight to five.

1.1. CONDITION SURVEY DATE AND PARTICIPANTS

The inspection took place on October 7, 2003. The inspection team consisted of Jerry A. Hann, Architect, from Larsen Consulting Group (LCG); Bob Jernstrom, Mechanical Engineer from Jernstrom Engineering, as well as David Beveridge, Southern District Regional Manager from Alaska Native Tribal Health Consortium (ANTHC).

1.2. CONDITION SURVEY GOALS

The inspection team focused on three primary tasks. First, identifying current code deficiencies and to identify improvements that would extend the facility's serviceable life for years to come. The facility was assessed with respect to current fire and life safety codes, as well as accessibility standard compliance. Inspection of the existing building components and systems were based on visual, nondestructive methods. As a result, concealed construction or interiors of pipes were not inspected. No guarantee is made or implied that all code violations and/or worn or unsafe systems have been identified in this report.

Secondly, the inspection team worked with medical professionals (Dr. McGrath), clinic staff and the City Manager (Jon Bolling) to receive recommendations for correcting major issues concerning use of spaces and general circulation of the clinic. It was noted there was little staff control of patients arriving and leaving the clinic for billing purposes. The request for additional storage was a major concern to be incorporated in the future remodel. Recommendations for increase utilization of wasted spaced were provided. Conditions relative to staff, patient and visitor safety, privacy and flow were discussed and evaluated as many remodeling suggestions were received. These suggestions are incorporated in the attached proposed remolded plan. These proposed changes would promote a more pleasant environment and improve health service delivery.

Thirdly, the inspection team also was asked to look at the Public Health Nurse portion of the facility for typical deficiencies, areas that can be changed or redesigned for improved usage and areas for expansion to add desired storage. The attached proposed floor plan incorporates these concepts.



1.3. GENERAL CODE ISSUES

The facility inventory and condition survey was reviewed for compliance with the latest adopted edition of the following building codes:

State of Alaska Fire and Life Safety Regulation	<u>S</u>		
IBC 2000	International Building Code		
UMC 2000	C 2000Uniform Mechanical Code		
UPC 2000	Uniform Plumbing Code		
NFPA 70	National Electric Code		
NFPA 25 Stand	dard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems		
NFPA 72	Fire Alarm Code		
NFPA 101	Life Safety Code		
ADA	Americans Disabilities Act		
1.4. DEFICIENCY CODES			
Deficiencies are categorized according to the prioritized for funding. The codes are as follows	following deficiency codes to allow the work to be s:		
01 Fire and Life Safety:	These deficiencies identify areas where the facility is not constructed or maintained in compliance with provisions of the state mandated life safety aspects of building codes including the Uniform Building Code, International Building Code, The Uniform Fire Code, NFPA 101, The Uniform Mechanical and Plumbing Codes and The National Electrical Code. Deficiencies could include inadequacies in fire barriers, smoke barriers, capacity and means of egress, door ratings, safe harbor, and fire protection equipment not covered in other deficiency codes.		
02 Disability Access Deficiencies:	_The items with this category listing are not in compliance with the Americans with Disabilities Act. This could include non-compliance with accessibility in parking, entrances, toilets, drinking fountains, elevators, telephones, fire alarm, egress and exit access ways, etc.		



03 Architectural M & R:	_Items affecting the architectural integrity of the facility, materials used, insulation, vapor retarder, attic and crawlspace ventilation, general condition of interiors, and prevention of deterioration of structure and systems.
04 Structural Deficiencies:	These are deficiencies with the fabric of the building. It may include the foundations, the roof or wall structure, the materials used, the insulation and vapor retarders, the attic or crawl space ventilation and the general condition of interior finishes. Foundation systems are included in this category.
05 Mechanical Deficiencies:	These are deficiencies in the plumbing, heating, ventilating, air conditioning, or medical air systems, interior mechanical utilities, requiring maintenance due to normal wear and tear that would result in system failure.
06 Electrical Deficiencies:	These are deficiencies with normal or emergency power, electrical generating and distribution systems, interior electrical and communications utilities, fire alarm systems, power systems and communications systems within a building that should be repaired or replaced on a recurring basis due to normal wear and tear that would otherwise result in system failure.
07 Utilities M & R:	This category is used for site utilities for incoming services to facilities that are required for the building to be fully operational. Deficiencies may include sewer and water lines, water wells, water tanks, natural gas and propane storage, electric power and telecommunications distribution, etc.
08 Grounds M & R:	Real property grounds components that should be replaced on a recurring basis due to normal wear and tear. Deficiencies with respect to trees, sod, soil erosion, lawn sprinklers, parking, bridges, pedestrian crossings, fences, sidewalks & roadways, and site illumination etc. are considerations.
09 Painting M & R:	_Any painting project that is large enough to require outside contractors or coordination with other programs.



10 Roof M & R:	Deficiencies in roofing, and related systems including openings and drainage.		
11 Seismic Mitigation:	Deficiencies in seismic structural items or other related issues to seismic design, including material improperly anchored to withstand current seismic requirements effect. The elements under consideration should include the cost incidental to the structural work like architectural and finishes demolition and repairs		

1.5. DEFICIENCY IDENTIFICATION

Deficiencies are referenced by discipline, first two letters of the community and then deficiency number. For example: Acr01 breaks down as follows, "A" indicates architecture as the discipline, "cr" indicates Craig as the community and "01" indicates the deficiency number referenced. A table, grouping all deficiencies by discipline is located in Appendix A. Deficiencies with associated photographs are referenced in green. A photo log of deficiencies is provided, with photos referenced by deficiency number.

1.6. COMMUNITY PROFILE



Craig

Information Obtained from the Alaska Department of Community and Economic Development (DCED) Community Database Online

Current Population: 1,227 (2002 DCED Certified Population)

Incorporated Type:
Borough Located In:
School District:
Regional Native Corporation:

1st Class City
Unorganized
Craig City Schools
Sealaska Corporation

Location: Craig is located on a small island off the west coast of Prince of Wales Island, and is connected by a short causeway. It is 31 road miles west of Hollis. It lies 56 air miles northwest



of Ketchikan, 750 air miles north of Seattle, and 220 miles south of Juneau. It lies at approximately 55.47639° North Latitude and -133.14833° West Longitude. (Sec. 06, T074S, R081E, Copper River Meridian.) Craig is located in the Ketchikan Recording District. The area encompasses 6.7 sq. miles of land and 2.7 sq. miles of water.

History: The Tlingit and Haida peoples have historically utilized the area around Craig for its rich resources. With the help of local Haidas, a fish saltery was built on nearby Fish Egg Island in 1907 by Craig Miller. Between 1908 and 1911, he constructed the Lyndenburger Packing Company and cold storage plant at the present site of Craig. In 1912, a post office, a school, a sawmill, and a salmon cannery were constructed. The cannery and sawmill peaked during World War I. A city government was formed in 1922. Excellent pink salmon runs contributed to development and growth through the late 1930s -- some families from the Dust Bowl relocated to Craig during this time. During the 1950s, the fishing industry collapsed due to depleted salmon runs. In 1972, Ed Head built a large sawmill six miles from Craig near Klawock, which provided year-round jobs and helped to stabilize the economy. Head Mill was sold in the early 1990s to Viking Lumber.

Culture: Craig is predominantly a fishing community.

Economy: The economy in Craig is based on the fishing industry, logging support and sawmill operations. A fish buying station is located in Craig. Two hundred residents hold commercial fishing permits. Craig has grown as a service and transportation center for the Prince of Wales Island communities. Shan-Seet Village Corporation timber operations, the Viking Lumber Co. sawmill, fishing, fish processing, government and commercial services provide most employment. Deer, salmon, halibut, shrimp and crab are harvested for recreational or subsistence purposes.

Facilities: All households are fully plumbed. Water is supplied by a dam on North Fork Lake, then is treated, stored in a tank, and piped to homes. Sewage is collected by a piped gravity system, and receives primary treatment before discharge into Bucareli Bay. Refuse is collected and deposited in Klawock's landfill. The City also participates in annual hazardous waste collection events. A local priority is to develop a new regional landfill. Alaska Power & Telephone Co., based in Skagway, owns and operates diesel power systems in Hydaburg and Craig and a hydroelectric facility at Black Bear Lake, which provides electricity to many Island communities.

Transportation: Scheduled air transportation to Ketchikan is available from the nearby Klawock airport. A State-owned seaplane base at Klawock Inlet and a U.S. Coast Guard heliport are maintained in Craig. The State ferry serves Hollis 30 miles away and enables transportation of passengers, cargo and vehicles to the Island. There are two small boat harbors, at North Cove and South Cove, a small transient float and dock in the downtown area, and a boat launch ramp at North Cove. The J.T. Brown Marine Industrial Center is under development on False Island, on the north side of Crab Bay. The facility will include a dock and boat launch. Freight arrives by cargo plane, barge and ferry in Hollis. A paved road exists between Hollis, Craig, Klawock, and north to the airport. Three miles of pavement were completed on the north-bound road in 1997, and further paving is scheduled.

Climate: Prince of Wales Island is dominated by a cool, moist, maritime climate. Summer temperatures range from 49 to 63; winter temperatures range from 32 to 42. Average annual



precipitation is 120 inches, including 40 inches of snow. Gale winds are common in the fall and winter months.

1.7. EXISTING AND CONCEPTUAL MODIFICATION DRAWINGS

Following this section we have attached drawings we have been able to identify, find, or create as part of this report.

- C1 Regional Site Map
- C2 Vicinity Map
- A1 Existing Floor Plan
- A2 Demolition Floor Plan
- A3 Proposed Floor Plan



REGIONAL SITE MAP



FACILITY ASSESSMENT AND INVENTORY SURVEYS FOR CRAIG CLINIC

223.33 DESIGNED BY: SOB NO 9CALE: DATE ALASKA NATIVE TRIBAL HEALTH CONSORTIUM

12/12/03 NTS

STEET

SCALE: NTS



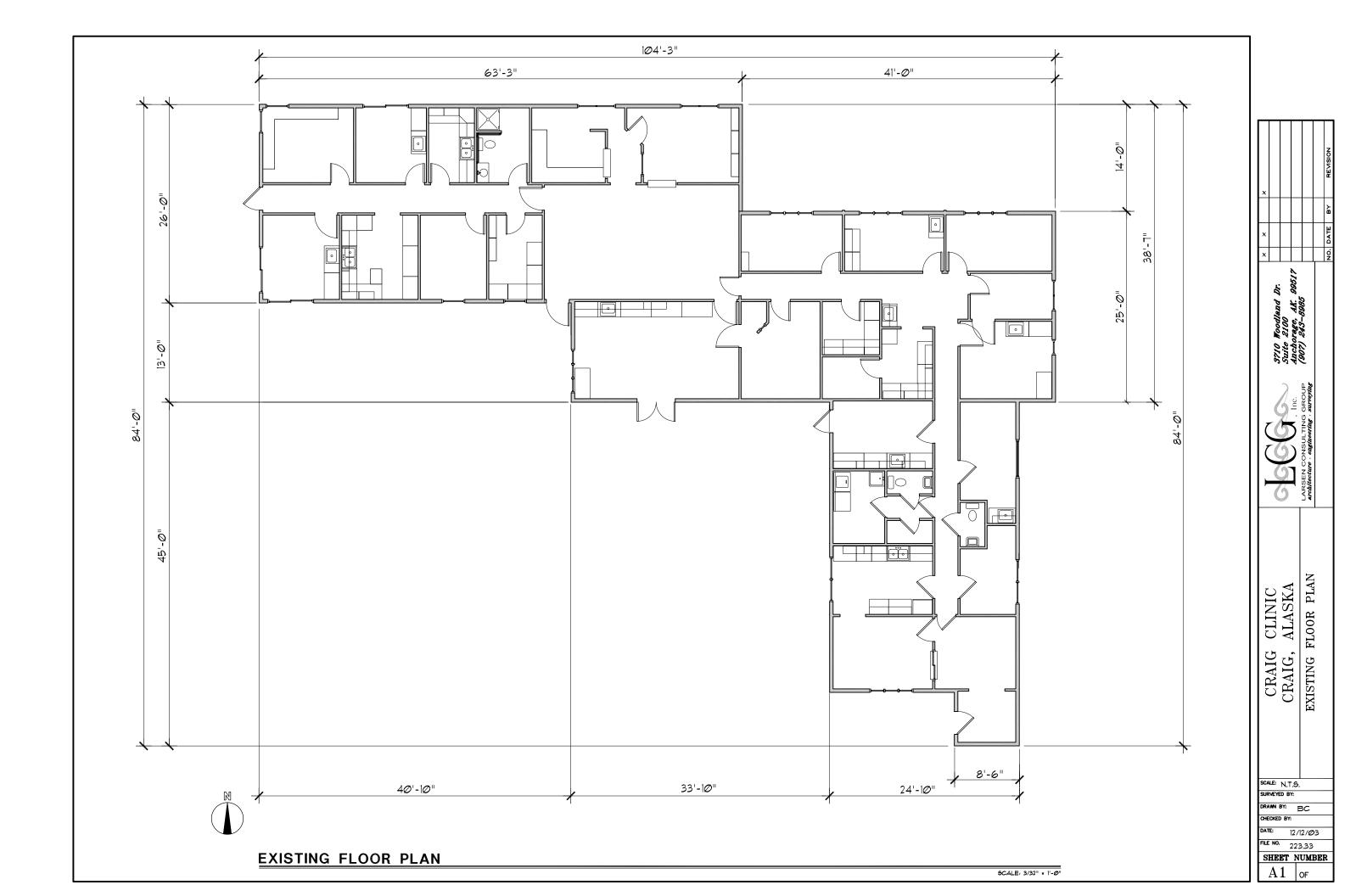
EXISTING VICINITY MAP



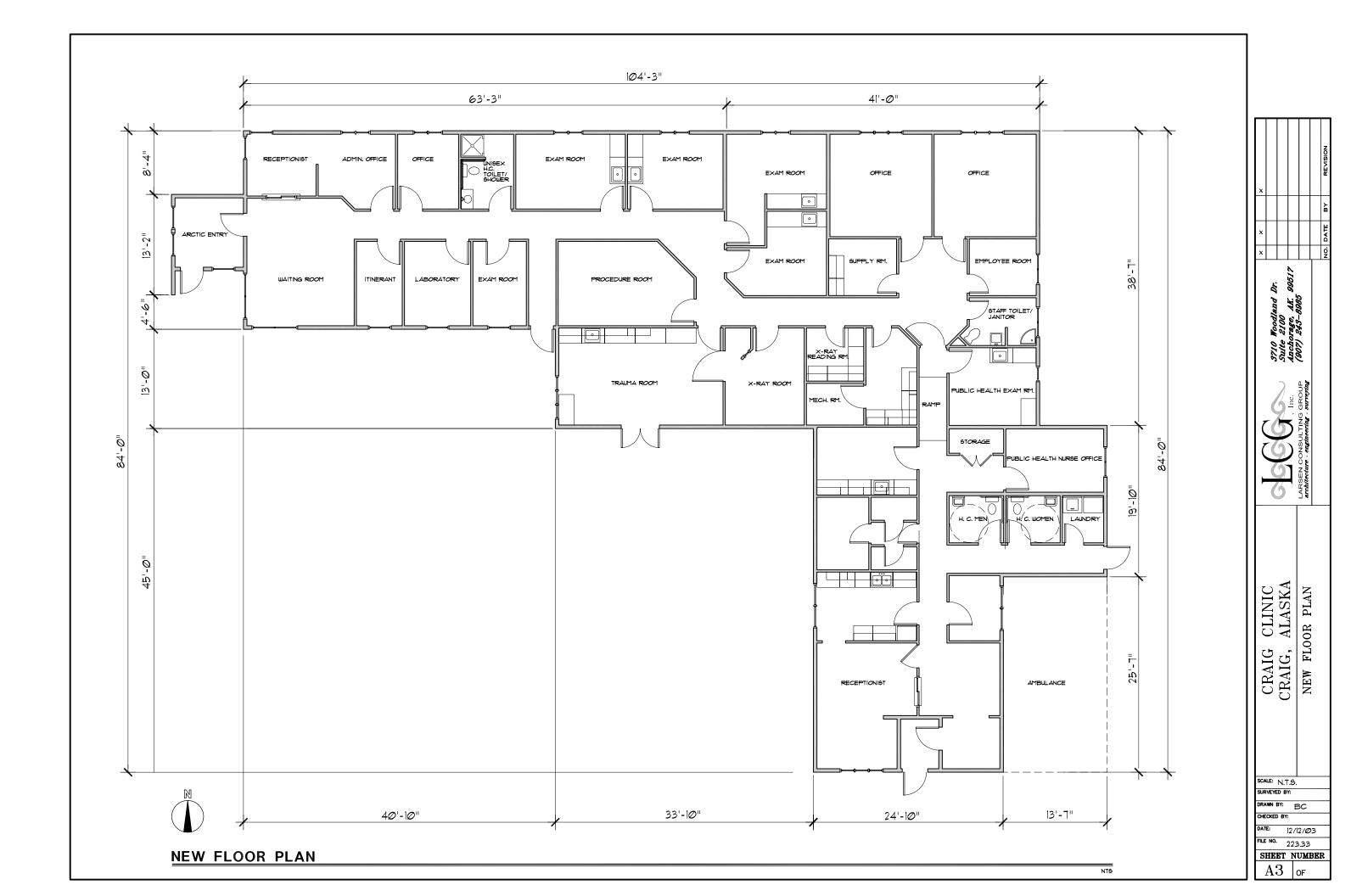
FACILITY ASSESSMENT AND
INVENTORY SURVEYS
FOR CRAIG CLINIC
ALASKA NATIVE TRIBAL HEALTH CONSORTIUM

SCALE: NTS	41115		2	1
	9Y.	12/12/03	OTN	223.33
	DESIGNED BY.	DATE	SCALE:	SOB NO











2.0 CIVIL / SITE CONDITIONS

2.1. SITE / CAMPUS DESCRIPTION

The City of Craig owns the site and facility that houses the Seaview Clinic. The City leases a portion of the building for the Public Health Offices. The Craig Clinic formally known as the Seaview Medical Clinic is non profit and uses approximately one half of the total facility. There are three phases of building construction. In the late 1970's, the original building was the Public Health Office and followed shortly after that with the first addition. The second addition (Seaview Medical Clinic) was built between 1982 and 1984. Essentially, addition two and part of addition one comprise the Craig Clinic.

The site appears to be well graded but access to the clinic is not laid out in such a manner to provide for adequate identifiable signage to access either the Public Health Offices or the Clinic. Travel ways are acceptable for both transient and emergency traffic, and doesn't create vehicle travel ways that conflict with pedestrian traffic. The building was built primarily on grade with good drainage and has fair handicap access.

2.2. SITE UTILITIES

<u>Power:</u> Electrical service is provided by Alaska Power and Telephone. The service pole is located near the facility with an overhead drop from three dry type individual pole mounted transformers configured to provide a 208Y/120V 3 phase 4 wire service. The metering is provided on the building in a recently replaced combination meter base disconnect.

<u>Telecommunication Systems:</u> The telephone service enters the building underground and is routed to a cross connect protection block adjacent to the electrical service entrance. The facility has one line for public health and one line for the clinic.

<u>Fuel Oil Requirements and Capacity:</u> The fuel supply for the clinic is from a 550 gallon aboveground fuel tank. The exact date of the installation is unknown, but it was determined that the tank is at least 20+ years old. The fuel oil storage tank is located adjacent to the building and not a minimum of 5 ft. from the clinic as required by code. This fuel oil storage tank does not meet code requirements for piping, venting and valving.

<u>Water Distribution:</u> Domestic cold water is used for all normal plumbing uses like lavatories, toilets, shower, sinks, etc. The water pressure at the building is at least 40 psi. A system provides the clinics domestic water needs.

<u>Sewage Disposal:</u> A city sanitary sewer system handles the clinics sewer and waste requirements.



3.0 ARCHITECTURAL FINDINGS

The Craig Clinic is a single story structure, with crawl space, comprising a total area of approximately 3,971 square feet. A covered carport structure is attached to the east side of the original building for ambulance parking. The clinic accommodates all major functions including emergency/trauma room, a small pharmacy, a small employee area, x-ray room, administrative areas and other miscellaneous support rooms.

The structure has undergone two additions since its original construction in the late 1970's. The exterior envelope is in good condition with most of the building exterior being recently clad with "Hardi-Plank" lap siding. Three years ago, new "Skyline" metal roofing was installed over the original and first addition. The second addition has its original cedar shake roof. The windows and doors are well maintained and provide good protection from the elements. Aesthetically the new siding on the building exterior is pleasing and gives it the look of one cohesive structure rather than a facility that has underwent two additions.

The interior is kept clean and shows the pride of the people that work there; although there is a need for additional space to store supplies and equipment to alleviate the clutter. The buildings finished materials on the floors, walls and ceilings, in addition to doors, fixtures and casework are suitable for the clinic. Sanitation standards can be improved in some areas of the clinic such as the bathroom facilities as well as up-grading to ADA standards. Aesthetically the interior has a neutral to cold feel that can be improved by painting with controlled accent colors. The clinic can also be improved functionally. See A3: Remodeled Floor Plan

There were no record drawings available to review original construction nor were drawings available for the subsequent two additions for roof, wall and floor assemblies. The following building assemblies are derived from non-invasive site observations.

3.1. ROOF ASSEMBLY

Roof assembly is from exterior to interior as follows:

- → Metal Roofing 3 years old (Original & First Addition)
- ★ Cedar Shakes (Second Addition)
- → 5/8" Plywood Sheeting
- → Pre-fabricated truss at 24" O. C. with scissor trusses over the waiting area in the Clinic at the second addition.
- → R-30 Fiberglass Batt Insulation
- + 6 mil. Vapor Retarder
- + 5/8" Type "X" GWB



3.2. WALL ASSEMBLY

Exterior wall assembly components are listed from interior to exterior as follows:

- + 5/8" type "X" GWB
- → 6 mil. Vapor Retarder
- + 2"x6" Studs at 24" O. C.
- → R-21 Batt Insulation
- → ½" Plywood Sheeting
- → T1-11 siding with 5/8" CDX plywood replacing deteriorated T1-11.
- + Hardi-Plank lap siding except at the far N/E side of the original building where the proposed (storage) addition was to be added.

Typical interior wall assembly components are as follows:

- + 5/8" type "X" GWB
- + 2" x 4" wood studs.
- + 5/8" type "X" GWB

3.3. FLOOR ASSEMBLY

Floor assembly listed from interior to exterior are as follows:

- → Carpet, Sheet Vinyl and 12" x 12" Vinyl Composition Tile
- → 3/8" Underlayment at SV and VCT flooring. (Assumed)
- → ¾" T&G plywood-decking at carpeted areas
- + 2"x12" joists at 16" O.C.
- + R-30 (estimated) fiberglass batt insulation between joists with 1"x furring strips trying to hold the insulation in place.
- → Treated wood foundation walls and concrete footings at the original and first addition.
- + Concrete foundation walls with concrete footings for the second addition.
- → 6 mil. vapor retarder



3.4. BUILDING CODE ANALYSIS

Applicable Codes	American with Disabilities Act (ADA) International Building Code (IBC) – 2000 Edition International Fire Code (IFC) - 2000 Edition	
Construction Type	VB (Combustible Wood, No Fire Resistance and No Sprinklers)	
Occupancy Classification	R-3 Residential (IBC Section 310 & 101.2)	
Allowable Square Footage	R-3 Occupancy - Unlimited 3 Stories Allowable, 1 Actual (IBC Table 503 and 302.3.3)	
Actual Building Square Footage	First Floor: 8,589 Total Square Footage: 8,589	

3.5. LIFE SAFETY ISSUES

Life safety issues appear to be minimal. The major exits from the Health Clinic and the Public Health Offices do not provide adequate egress because of width of corridors. There are housekeeping issues that need to be addressed; including corridors cluttered with equipment and supplies. Crawlspace areas were also cluttered with miscellaneous storage items that present a fire hazard.

3.6. AMERICAN WITH DISABILITIES ACT

The building lacks many of the required ADA design guidelines.

Handicap access is provided at grade for the main entrance via ramp at the Public Health Offices is adequate however if accessibility is needed for the Clinic side, a ramp should be installed and the gravel parking area needs to be upgraded at the emergency entrance and required handicap parking stalls with concrete or asphalt to provide a smooth approach to the entry.

There is only one restroom in the entire facility that if fully ADA compliant. All other restrooms lack the required wheelchair maneuvering space, access through a minimum 36" door opening, lever hardware for doors and fixtures, adequate grab bars and plumbing protection under counter spaces. The two toilet rooms off the PHN offices corridor have grab bars at the toilets to accommodate access but do not come close to ADA compliance.

Throughout the facility general handicap accessibility lacks width (corridor in the Public health original building) for travel in many areas, maneuvering space on the strike side of doors, lack of door lever hardware. Most doors are only 30" wide.

ADA restroom and general issues are addressed in the Proposed Concept Remodel Plan. See A3. Remodeled Floor Plan



4.0 CIVIL / STRUCTURAL FINDINGS

A constant structural engineering concern of older buildings is the fact that the standard practices of engineering and construction for wood framed buildings used prior to the mid 1980's did not concern themselves with the forces exerted on a structure by earthquakes. The result of this practice is that most wood framed buildings were built without the allowances for a fully developed lateral shear and hold-down system from the roof down through the walls and floor framing system to the foundations. As this is a very difficult thing to verify after all the finishes are in place, one can only assume that such framing anchorage does not exist. Our vast experience with demolition and/or remodeling structures of older construction has proven time and again that these building do not incorporate these features and as such do not meet the building codes of today. ¹

4.1. GRADING

The site is fairly well graded and exhibited no evidence of standing water. The site is elevated on the South side that slopes toward the main down town and harbor.

4.2. FOUNDATION

Foundation showed no evidence of settlements. The original building and the first addition foundations were built on concrete footings with treated wood foundation walls. The second addition had concrete footings and foundation walls.

4.3. FLOOR FRAMING

The framing appears to be very sound and is suitable for the intended use.

4.4. ROOF FRAMING

The roof framing is a pre-manufactured wood truss system and appears to be suitable for the application. No visible distressing was noted.

4.5. WALL FRAMING

The walls in the building show very little to no amount of distressing such as sheetrock cracking or buckling. The wall support system appears to be functioning properly.

4-1

¹ A thorough structural evaluation was not conducted for this report. The items contained in this section of the report are general observations by the Architect. A thorough detailed report of structural connections and deficiencies will be necessary when a remodel of the existing clinic is designed.



5.0 MECHANICAL FINDINGS

5.1. PLUMBING

5.1.1. Domestic Water Systems

The city water system provides the clinic's domestic water needs. Domestic cold water is used for all normal plumbing uses such as, lavatories, toilets, exam room sinks, shower, etc. The water pressure at the building is at least 40 psi. Piping for domestic water in the building is Type L copper with solder fittings.

There appears to be no problems with the taste and color of the drinking water. Plumbing fixtures in the clinic are generally not barrier free and do not meet the ADA standards. This applies to water closets, lavatories and shower throughout the clinic.

A boiler side arm heater uses boiler water to heat the domestic water system. This single wall heat exchanger does not meet code for double wall heat exchangers in this situation. The domestic water heater is also putting out 140°F water, which is too high for this facility.

5.1.2. Sanitary Soil, Waste, and Vent

The sanitary soil, waste and vent system serves all the plumbing fixtures throughout the clinic. Pipe sizing has been determined to include a city sanitary sewer main, a 4" main from the clinic, and 4" or 2" branch lines serving the fixtures. Piping aboveground is DWV copper pipe with solder fittings with some cast iron soil pipe with no-hub fittings. There is an existing leak in the waste piping under the clinic in the crawlspace.

5.1.3. Storm Drains

The existing roof does not use roof drains for rainfall drainage. Gutters are used which are acceptable by code. The condition of the roof and gutters was good.

5.2. FIRE SUPPRESSION

5.2.1. Fire Dampers

There are no active air handling systems in the facility; therefore, fire dampers are not required or installed.

5.2.2. Ionization Smoke Detectors

With no active air handling systems in the facility, ionization smoke detectors are not required.

5.2.3. Sprinkler System

There is no sprinkler system in the clinic, nor is one required by code.



5.3. HEATING SYSTEMS

The heating system zones in the facility have been expanded for each clinic addition. The heating piping arrangement shows that there are six (6) heating zones in the clinic.

A reverse return system is used in this facility. This system uses baseboard units and supply and return heating pipes looped around the building. Each group of baseboard units is controlled by a room thermostat with a zone valve located in the boiler room.

Water is used as a heating medium in this facility. The heating distribution piping is Type L copper pipe with wrought solder fittings. The maintenance personnel noted that the heating system can handle the entire clinic during colder winter weather.

A number of problems with the boiler installation follow:

- → The cast iron boiler is over 20 years old and will need to be replaced in the near future.
- ★ The room is used as a storage area that can be a fire hazard and limits the ability to service and maintain the boilers.
- → Severe corrosion was noted on the boiler stack. The corrosion on the boiler stack can be serious if the stack fails.
- → The last State of Alaska boiler inspection of this facility was in 1998. State boiler inspections are required every 2 years.
- → The boiler cold water fill does not have an approved backflow preventer.

5.4. VENTILATION SYSTEMS

The are no air handling systems in the facility. Some evidence is noted in the attic of old ventilation ductwork, but the fan systems have been long since removed.

The clinic's exhaust fans are operational and are ducted to the outside as required by code. A few areas are without exhaust fans to remove vapors or odors. These include the janitor's room and nurse's lab.

The waiting rooms, x-ray room, lab, and one exam room do not have an accessible operable window nor is there any ventilation system in the clinic to provide ventilation air to these spaces as required by code.

5.5. FUEL SYSTEMS

The fuel supply for the clinic is from a 550 gallon aboveground fuel tank. The exact date of the installation is unknown, but it was determined that the tank is at least 20+ years old.

The fuel oil storage tank is located adjacent to the building and not a minimum of 5 ft. from the clinic as required by code. This fuel oil storage tank does not meet code requirements for piping, venting and valving. The fuel supply to the boiler does contain a filter, but not an isolation valve, fusible valve or oil safety valve. The fuel oil supply and return piping used is soft copper tubing with flare fittings. The piping at the tank is lacking proper pipe supports.



5.6. COOLING SYSTEMS

There is no cooling system provided for the clinic.²

5.7. CONTROL SYSTEMS

The individual temperature controls (thermostats) for the heating zones seem to operate correctly and provide the required control.

The boiler is operated using its combination high limit and operating controller. The boiler fires to maintain the heating water supply setpoint. This controller was operating as required.

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² Neither mechanical refrigeration nor outside air.



6.0 ELECTRICAL FINDINGS

6.1. ELECTRICAL DISTRIBUTION

<u>Electrical Service</u>: Electrical service is provided by Alaska Power and Telephone. The service pole is located near the facility with an overhead drop from three dry type individual pole mounted transformers configured to provide a 208Y/120V 3 phase 4 wire service. The metering is provided on the building in a recently replaced combination meter base disconnect.

The service later is routed down the pole underground to the bottom of the Cooper NEMA 3R, combination meter base with Service Entrance Rated 200 Amp main disconnect in PVS conduit. The service drop appears to be (4) 600 KCMIL AI conductors. The service was recently upgraded in the spring of 2003. A surge arrester is installed incorrectly in the utility side of the meter base tapped to the main feeder with no overcurrent protection which should be corrected.

The service disconnect feeds the MDP with 3/0 AWG copper conductors protected by the 200 amp main breaker.

An abandoned service riser and weatherhead is also installed on the building that needs to be removed.

<u>Distribution System:</u> The MDP branch circuit breaker panel appears to also have been recently replaced at the same time as the new service. The panel has several code issues related to type NM cable possibly installed in patient care areas. The panels do not have adequate NEC required working clearances due to storage shelving located in front of the panel. The shelving should be removed to provide the required working clearances. Some of the conductors appear to enter the back of the panel through a knock with no connector or bushing protecting the conductors. These conductors appear to enter from the wall behind the panel with no raceway.

The MDP directly feeds the second branch circuit panel located beside the MDP with a 100 amp circuit breaker. The MDP also serves the X-ray panel which is fed via a 150 Amp circuit breaker.

While inspecting areas above the ceiling and crawl spaces the use of type NM cable (Romex) was noted. This cabling system is not approved for patient care areas and must be replaced.

Raceways and junction boxes installed in the ceiling and crawl spaces were noted to not be supported per NEC requirements.

Open junction boxes were noted in the crawl space, attic spaces and mechanical rooms.

The exterior receptacle weatherproof cover plate is damaged and needs to be replaced.

GFCI protected receptacles were not installed at many countertops. Although not a code requirement in all cases it is considered good design practice for safety at locations where sinks are located.



<u>Bonding and Grounding</u>: The service grounding electrode system consisted of a #6 AWG grounding electrode conductor routed to a single ground rod located below the main disconnect and the water service according the mechanical engineers notes. No photo was provided of this bond to determine the location and proper installation. The conductor could not be found in any photos leaving the service entrance equipment and therefore we suspect it may not be actually installed. The neutral to ground bond is located in the main disconnect.

The telephone service is bonded to the main grounding electrode routed to the ground rods.

6.2. LIGHTING

<u>General:</u> Facility lighting consists mostly of surface fluorescent fixtures, using 4 lamp T12 technology with magnetic ballasts.

<u>Emergency Lighting:</u> The emergency lighting for the facility is typically provided by unit mounted wall pack bug eye type units. However, the units are not installed per code requirements. The units do not provide complete coverage, the units are not connected to the local lighting circuit and the units are using extension cords as fixed in place wiring. These units need to be upgraded for NEC requirements.

<u>Exit Signage:</u> The exit signs are not illuminated and are not powered by two sources. These signs need to be upgraded to the requirements of the IBC.

<u>Exterior Lighting:</u> Exterior lighting is provided by wall pack high pressure sodium and incandescent units. They did not appear to be controlled by a photocell. The fixtures are showing there age with the diffusers beginning to yellow causing a depreciating light output.

6.3. FIRE ALARM SYSTEM

No fire alarm system is installed for the facility. A lone single station smoke detector is installed; however, it is not functional.

6.4. TELECOMMUNICATION

The telephone service enters the building underground and is routed to a cross connect protection block adjacent to the electrical service entrance. The facility has one line for public health and one line for the clinic.

The computer data system is installed through out the facility. However many of the cables are not supported or installed in a neat and workman like manor.



7.0 CONCLUSION AND RECOMMENDATIONS

7.1. SUMMARY OF ARCHITECTURAL FINDINGS

Architectural findings and analysis were focused on life safety/code issues, Americans with Disabilities Act compliance and facility space functions/efficiencies specifically related to the operations of the clinic.

There are several life safety issues pertaining to this facility. Most are defined in their respective structural, mechanical and electrical sections of this report.

In regards to ADA compliance, this facility is in violation at some level with every ADA design guideline. Of the existing restrooms, only one fully complies. Maneuvering space, counter heights, hallway and door widths, furniture and cluttered storage account for many of the obstacles encountered by the handicapped. However, with modifications, as shown in A3: Remodeled Floor Plan, many or all of these issues can be addressed for partial to full compliance.

Five major concerns that must be addressed in a proposed remodel were presented by the physician and staff:

- 1. Provide administrative staff visual access to all patients entering and leaving the facility to control payment issues.
- 2. Provide better patient privacy.
- 3. Provide better access from Waiting Room to X-ray Room and to Exam Rooms.
- 4. Provide a Procedures Room near the Emergency / Trauma Room.
- 5. Provide more storage for both the Clinic and the PHN Offices.

The functional upgrades recommended in this report will help alleviate ADA concerns; as well as upgrade antiquated finishes that help modernize the facilities sanitation minimums, while increasing interior aesthetics. The overall "architectural" condition of the facility has been maintained and kept clean and does not adversely affect the delivery of effective health care.

7.2. SUMMARY OF CIVIL / STRUCTURAL FINDINGS

Without destructive investigation into enclosed assemblies, review of a building insofar as its structural integrity is based on what is not seen. In other words, if there was a structural issue there would usually be telegraphic signs such as cracked wall board, truss separation at the top plate, foundation cracking or jacking, un-level floors etc. The Craig Clinic shows no such signs of structural failures or concerns. In fact, the construction in general was found to be professionally completed.

However, a constant structural engineering concern of older buildings is the fact that the standard practices of engineering and construction for wood framed buildings used prior to the mid 1980's did not concern themselves with the forces exerted on a structure by earthquakes. The result of this practice is that most wood framed buildings were built without the allowances for a fully developed lateral shear and hold-down system from the roof down through the walls



and floor framing system to the foundations. As this is a very difficult thing to verify after all the finishes are in place, one can only assume that such framing anchorage does not exist. Our vast experience with demolition and/or remodeling structures of older construction has proven time and again that these building do not incorporate these features and as such do not meet the building codes of today.

A thorough structural evaluation was not conducted for this report. A thorough detailed report of structural connections and deficiencies will be necessary when a remodel of the existing clinic is designed.

7.3. SUMMARY OF MECHANICAL FINDINGS

The clinic facility has numerous problems in the mechanical systems. These problems range from small plumbing issues to large and complex code related hazards. Any remodel or renovation to this facility will require an upgrade or repair to the mechanical systems. Some of this work can be done in stages, but there are health issues that should be address now.

A summary of the major and minor problem areas are as follows:

Plumbing

- → Replacement of plumbing fixtures in the clinic that are not barrier free and do not meet the ADA standards.
- → Replace the boiler side arm heater, used to heat the domestic water system, with a double wall heat exchanger.
- → Replace the domestic water heater heating control valve since the existing one is also putting out 140°F hot water.
- + Repair the existing leak in the waste piping under the clinic in the crawlspace.

Fire Protection

+ There are no fire protection issues affecting the operation of the clinic.

Heating Systems

- ★ The boiler system problems are as follows:
 - ♦ The cast iron boiler is over 20 years old and should be replaced.
 - Remove the clinic storage from the boiler area.
 - ♦ The corrosion on the boiler stack.
 - State boiler inspection is required
 - The boiler cold water fill does not have an approved backflow preventer.

Ventilation Systems

- + Install exhaust air fans for the janitor's room and nurse's lab.
- → The waiting rooms, x-ray room, lab, and one exam room do not have an accessible operable window nor is there any ventilation system in the clinic to provide ventilation air to these spaces as required by code.



Fuel Systems

Relocate the aboveground fuel tank and replace the piping to meet current EPA requirements.

Cooling Systems

→ There are no cooling issues affecting the operation of the clinic.

Control Systems

→ There are no control issues affecting the operation of the clinic.

7.4. SUMMARY OF ELECTRICAL FINDINGS

The facility electrical system wiring is in poor condition and some of the recently installed new work has code violations that must be corrected. It appears that type NM cable may be installed into patient care areas. The emergency illumination and "Exit" signs are not installed per NEC requirements and need to be replaced. Working space requirements in front of the MDP and branch circuit panel needs to be provided. The wiring into the MDP that appears to be routed from the wall into the panel with no connectors or chases need to be corrected. The surge protector installed in the service entrance meter base must be corrected.

7.5. RECOMMENDATIONS

Based on the overall fair to good condition of the facility, the review team recommends that the Craig Clinic be renovated, as opposed to replaced. Following is a breakdown of anticipated project costs:

ROM Costs for Detailed Improvements	\$347,550
Construction Contingency @ 20%	69,510
Architectural Fees @ 14%	48,657
Construction Administration @ 10%	34,755
Total	\$500.472

Using a high end rough construction budget of \$550,000 we recommend that an architectural and engineering consultant be engaged to prepare construction documents required to facilitate the addition/renovation. The proposed modifications illustrated in the enclosed schematic drawings (A1-A3) are the result of close coordination between the architect, owner and end users.

Architectural Deficiencies			
Item #	Code	Deficiency	Suggested Resolution & Rough Order of Magnitude Cost Estimate
Acr01	01	Flammable materials in the crawl space.	Remove all flammable items stored in the crawl space. (\$0)
Acr02	03	Floor insulation deteriorating and falling from the floor joists throughout crawl space.	Remove deteriorated insulation, replace and install support system to secure in place. (\$5000)
Acr03	03	Ceiling in Mechanical room has water damage.	Repair, patch and paint ceiling. The metal roof had been replaced recently so leak in roof has been apparently repaired. (\$2000)
Acr04	02	Exterior door hardware not compliant.	Replace all exterior door hardware. (\$2,000)
Acr05	02	Interior doors are too narrow into public spaces.	Replace all doors into public spaces with ADA compliant doors. (\$7,000)
Acr06	02	Doors do not have proper lever handles.	Install ADA compliant door handles on all interior doors. (\$9,000)
Acr07	02	Corridors in the original Public health Offices and the first addition are too narrow.	Redesign corridors to comply with minimum requirements of the code. The estimated construction costs for this deficiency is included in Acr18.
Acr08	02	Ramp from the original Public Health Office to the first addition is more than the code allows.	Redesign ramp to comply with ADA requirements including handrails. (\$10,000)
Acr09	02	Entrance door threshold at the S/E Public Health Offices is more than ½" above the entry (ramp).	Replace threshold or raise entry to comply with the ADA requirements. (\$250)
Acr10	03	No Arctic Entry at the Public Health main entrance.	Construct new Arctic Entry. (128 sq. ft. x \$200 per sq. ft. = \$25,600)
Acr11	03	No Arctic Entry at the Clinic entrance.	Construct new Arctic Entry. (100 sq. ft. x \$200 per sq. ft. = \$20,000)
Acr12	03	Cedar Shake roof has moss growing on it.	Replace Cedar Shakes with metal roofing to match the rest of the building. (3,971 sq. ft. x \$6.00/sq. ft. = \$23,800.00)
Acr13	03	Insulation in ceiling space not covering middle of space.	Install insulation. (\$2000)

Acr14	02	No ramp at clinic entry.	Install ramp. (\$5,000)
Acr15	02	No hard surfaces at concrete ramp to emergency / trauma room,	Provide hard surface (approx. 20'x20') for emergency vehicle parking and off loading. (\$3,500)
Acr16	02	Hall too narrow.	Increase hall width to minimum 44". The estimated construction costs for this deficiency is included in Acr18.
Acr17	02	Door does not have minimum 18" on pull side of wall space for wheelchair and crutches.	Provide proper distance. The estimated construction costs for this deficiency is included in Acr18.
Acr18	02	Toilet room in PHN area does not meet ADA requirements.	Design new space for ADA compliance restroom(s) in PHN area. The cost estimate for this deficiency covers a 171 sq. ft. addition (see sketch A3) needed to accommodate larger ADA restrooms. In addition, this estimate covers other deficiencies in the adjacent areas affected by the changes to building
			wide finish upgrades. (\$60,000)
Acr19	02	Hall door does not have minimum 18" on pull side of wall.	Provide proper distance. The estimated construction costs for this deficiency is included in Acr18.
Acr20	03	Additional space is necessary for proposed renovation and expansion.	Add 574 SF at northeast corner of the building for addition of offices and exam rooms. (\$150,000)
		Mechanical Deficiencies	S
Item #	Code	Deficiency	Suggested Resolution
Mcr01	02	The last State of Alaska boiler inspection of this facility was in 1998. State boiler inspections are required every 2 years.	Coordinate with the State of Alaska, Department of Labor, Safety, and Standards to have the boiler inspected. (\$0)
Mcr02	12	The boiler cold water fill does not have an approved backflow preventer.	Provide an approved backflow preventer on the ½" cold water fill pipe. The estimated construction costs for this deficiency is included in Mcr05.
Mcr03	02	Severe corrosion on the boiler stack may cause premature failure of this system.	Replace the 6"ø all fuel chimney from the boiler up 10 feet to the roof penetration. The estimated construction costs for this deficiency is included in Mcr05.

		T	
Mcr04	02	A large number of boxes, parts, equipment, etc. are stored in the boiler room making access for inspections, maintenance, and repair difficult.	Provide another location to store all the materials currently stored in the boiler room. (\$0)
Mcr05	02	The boiler side arm heater uses boiler water to heat the domestic water system. This single wall heat exchanger does not meet code for double wall heat exchangers in this situation. The heater is also putting out 140°F water which is too high for this facility.	Abandon the boiler side arm heater and provide a new 50 gallon, oil fired hot water heater. Pipe the water heater into the existing domestic water system. Due to the age of the boiler we recommend the replacement of it and the water heater system. (\$10,000)
Mcr06	12	The existing water heater connection at the boiler has been installed without dielectric unions as required by code	Provide dielectric unions in the 3/4" domestic hot and cold water connections at the boiler. The estimated construction costs for this deficiency is included in Mcr05.
Mcr07	12	There is an existing leak in the waste piping under the clinic in the crawlspace.	Repair the leak in the 2" waste piping. (\$500)
Mcr08	12	The restrooms have been provided with plumbing fixtures that do not meet the ADA (barrier free) codes.	Provide ADA approved barrier free plumbing fixtures at all existing locations. Included are three water closets and three lavatories. Also provide an ADA approved pipe insulation kit for the waste, hot and cold water connections under the lavatories. The estimated construction costs for this deficiency is included in Acr18.
Mcr09	12	The waiting rooms, x-ray room, lab, and one exam room do not have an accessible operable window nor is there any ventilation system in the clinic to provide ventilation air to these spaces as required by code.	Provide a cabinet fan with heating coil and outside air connection so that a duct system with ceiling diffusers can provide air to this non-ventilated room. (\$1000)
Mcr10	12	The is no exhaust air for the janitor's closet as required by code	Provide a ceiling mounted exhaust fan and connect a 5"ø duct and route to a roof cap with backdraft damper. (\$250)
Mcr11	02	The fuel oil storage tank is located adjacent to the building and not a minimum of 5 ft. as required by code. The 550 gallon tank does not meet code requirements for piping, venting and valving.	Relocate the existing fuel oil tank a minimum of 5 ft. from the building. Provide a 2" vent pipe extension to terminate the vent 12 ft. above grade. Install ½" isolation valve and flexible connection in the fuel oil supply and return lines at the tank. (\$750)

Electrical Deficiencies				
Item #	Code	Deficiency	Suggested Resolution	
Ecr01	06	Existing service riser and weatherhead is still installed through roof and abandoned in place.	Remove existing raceway, conductors and weatherhead. (\$200)	
Ecr02	06	The new service has surge arrester installed without circuit breaker protection and located in the utility service side of the enclosure tapped on the main lugs.	Remove surge arrester and install per manufacturers recommendations. (\$100)	
Ecr03	06	Branch Circuit panels: From the photos it appears that some of the wiring is installed in NM type cable (This is in violation of the NEC 517 for patient care areas if these cables are extended to any space where patient care occurs). Wiring is entering through the back of the main panel with no connector or bushing. A large knock out is not sealed in the bottom of the panel. Circuit breaker blanks are not installed exposing live bus to possible contact. Working clearance in front of the main panel and the adjacent panel is not provided per NEC requirements.	Replace all wiring that is installed in NM type cable that is routed to patient care areas. Correct wiring that enters the back of the panel with no connectors (this may require major rewiring of the building). Provide 2" K.O. seal in the bottom of the panel. Provide circuit breaker blanks for several poles. Revise panel and storage installation to provide working clearance in front of the two main branch circuit panels. (\$5000)	
Ecr04	06	Attic cables and raceways are not supported. Some of the cables appear to be abandoned which would be required to be removed.	Remove all abandoned cables installed in the attic and provide support for all existing to remain raceways and cables per NEC requirements. (\$1000)	
Ecr05	06	Crawlspace cables and raceways are not supported. Some of the cables appear to be abandoned which would be required to be removed.	Remove all abandoned cables installed in the crawl space and provide support for all existing to remain raceways and cables per NEC requirements. (\$1000)	
Ecr06	06	Exterior receptacle weatherproof cover is damaged.	Replace weatherproof cover. (\$100)	
Ecr07	06	Provide cover plates for existing junction boxes around the facility with no cover allowing energized conductors to be out of the enclosure.	Provide blank covers for all open junction boxes. (\$100)	
Ecr08	06	Receptacles and switches are missing ad plates are damaged around the facility.	Provide receptacle and switch covers for all devices around the facility where the plate is cracked or damaged. (\$200)	
Ecr09	06	One room has been remodeled and has	Consider adding a light control switch on	

		no local lighting control switch. This is not a code violation but is good design	the room's entry. (\$150)
		practice.	
Ecr10	06	Some fixtures have the diffusers damaged or not installed properly.	Repair and re-install all fixture diffusers. (\$150)
Ecr11	06	Nearly every receptacle located adjacent to each sink is not GFCI protected.	Provide GCFI protection for each receptacle located near sinks. (\$300)
Ecr12	01	The lone existing single station smoke detector is not functional. No fire alarm system is installed. It does not appear a system is required for this space.	Repair existing smoke detector. (\$100)
Ecr13	01	Exit signs are not illuminated and powered by two sources or of other type acceptable to IBC requirements	Provide illuminated exit signs per IBC requirements. (\$500)
Ecr14	01	Emergency Lighting: The units are installed using a temporary wiring method, Units are not connected to the local lighting circuit and insufficient installed units are existing.	Provide new units connected to the local lighting circuit no more than 20 ft apart through out the facility. (\$500)
Ecr15	06	Several of the existing interior and exterior light fixtures are not functional.	Repair each fixture that is not functional. (\$500)



Acr01(A) & Acr02(A)



Acr01(B) & Acr02(B)



Acr01(C) & Acr02(C)



Acr03(A)



Acr03(B)



Acr03(C)



Acr04(A)



Acr04(B)



Acr05(A) & Acr06(A)



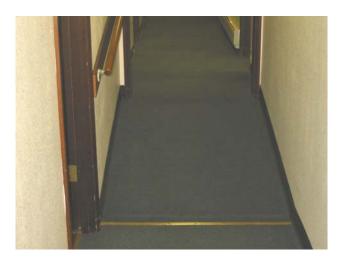
Acr05(C) & Acr06(C)



Acr05(B) & Acr06(B)



Acr07 & Acr08(A)



Acr08(B)



Acr09



Acr10(A)



Acr10(B)







Acr12



Acr13



Acr14



Acr15



Acr16 & Acr17



Acr18



Acr19





Mcr02







Mcr04







Mcr06





Mcr05



Mcr08





Mcr09 Mcr10



Mcr11





Ecr01 Ecr02





Ecr03 Ecr04





Ecr05 Ecr06





Ecr07 Ecr08





Ecr09 Ecr10





Ecr11 Ecr12





Ecr13 Ecr14



Ecr15



AGE01 South Elevation Looking Southeast



AGE02 Abandoned Entry to Former Trauma Room Looking Northeast



AGE03
Ambulance Canopy Looking North



AGE04 Foundation



AGE05 Entry to Public Health Nurse Looking North East



AGE06 Entry to Emergency Room - South Elevation



AGE07 East Elevation



AGE08 Clinic Handicap Bathroom



AGE09
Typical Looking Operable Windows



AGE10 Laundry Room



AGE11 Roof Trusses



AGE12 Emergency Room



AGE13 Crawl Space



AGE14 Clinic Entry



AGE15 Clinic Office, North-West Corner Office



AGE16 Clinic Exam Room, North-South Corner



AGE17 Typical Door Hardware



AGE18 Clinic Hall Looking West



AGE19 Clinic Administration Office



AGE20 Clinic Waiting Room Looking East



AGE21 Clinic Emergency Room Looking West



AGE22 Emergency Room Looking at X-Ray Door



AGE23 Hall at Clinic Looking East



AGE24 Hall at Clinic Looking West



AGE25 Hall at Public Health Nurse Looking South



AGE26 Public Health Nurse Exam Room (Old Trauma Room)



AGE27
Public Health Nurse Waiting Area Looking
Toward Receptionist



AGE28
Public Health Nurse Receptionist Area



AGE29
Public Health Nurse Entry Looking North-West



AGE30 Entry to Clinic Waiting Area Looking North



MGE01 Exterior Fuel Tank



MGE02 Exterior Fuel Piping to Boiler Room



MGE03 Boiler Assembly



MGE04 Storage in Boiler Room



MGE05
Exterior Combustion Air Opening for Boiler



MGE06 Boiler Zone Piping



MGE07 Waste Piping in Crawlspace



MGE08 Perimeter Baseboard Assembly



MGE09 Exterior Exhaust Air Opening



MGE10 Abandoned Ductwork in the Attic



MGE11 Patient and Staff Bathroom



MGE12 Patient Bathroom



MGE13 Shower Assembly Use For Storage



MGE14 Exam Room Sink



EGE01Service Transformers



EGE02 Electrical and Telephone Service



EGE03 Branch Circuit Panels



EGE04 X-Ray Panel



EGE05 Attic Wiring



EGE06 Crawl Space Wiring



EGE07 Open Junction Boxes



EGE08 Exterior Receptacle



EGE09 Exterior Lighting



EGE10 Interior Lighting



EGE11 Emergency Lighting



EGE12 Exit Signs

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